STATEMENT OF LEGAL AND FACTUAL BASIS

Hopewell Cogeneration Limited Partnership
Hopewell, Virginia
Permit No. PRO-50967

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Hopewell Cogeneration Limited Partnership has applied for a Title V Operating Permit for its Hopewell, Virginia facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____ Date:_____

Air Permit Manager:_____ Date:_____

Regional Deputy Director:_____ Date:_____

FACILITY INFORMATION

Permittee
Hopewell Cogeneration Limited Partnership
Hopewell Cogeneration Facility
1114 Hercules Road
Hopewell, Va. 23860

Facility
Hopewell Cogeneration Facility
1114 Hercules Road
Hopewell, Va. 23860

Responsible Official
Mr. Eric Heggeseth
Vice President
(804) 458-0700

Contact person
Gary Cassano or Harry C. Barnes
Environmental Representative
(804) 458-0770 Ext. 203

AIRS Identification Number: 51-085-0058

Facility Description: SIC Code Number - 4911.

The Hopewell Cogeneration Facility, a 356.5 MW combined cycle cogeneration facility, is an independent power producer. The Facility has three ABB type 11 N combustion turbines, each rated at 1,143.6 million-BTU/hour on natural gas and 1,091.1 million-BTU/hour on number 2 fuel oil, and three unfired Nooter Eriksen heat recovery steam generators (HRSGs), each rated at 360,000 pounds/hour. The Facility has one ABB 120,000 kilowatts steam turbine, and two auxiliary Babcock and Wilcox boilers, each rated at 229.0-million BTU/hour on natural gas and 220.0 million-BTU/hour on number 2 fuel oil. The Facility has two Caterpillar 1,500 KW diesel generators and three 1.250 million gallon number 2 fuel oil tanks.

The Hopewell Cogeneration Facility, which is located in an attainment area, is a federal major stationary source because the Facility's emissions exceed 100 tons per year and the Facility is one of the 28 stationary sources categories identified in 40 CFR 52, Section 52.21 or because total annual emissions exceed 250 tons per year. The Facility is a PSD major source and received a PSD permit issued on July 1, 1988 and amended on March 31, 1989 and October 31, 2000. A permit for a third number 2 fuel oil storage vessel was issued on June 6, 1990.

The Facility is a Title V major source of PM10, SO2, NOx and CO. pollutants.

The Standards of Performance (NSPS) for Stationary Gas Turbines, 40 CFR 60 Subpart GG are applicable to affected facilities with a heat input greater than 10.7 gigajoules per hour (10 million-BTU per hour) and to facilities that commenced construction, modification or reconstruction after October 3, 1997. The three ABB combustion turbines, rated at 1,143.6 million-BTU per hour, were constructed in August of 1988 and are subject to 40 CFR 60 Subpart GG.

The NOx Budget Trading Program is also applicable to the three ABB combustion turbines. Since the units commenced operation before January 1, 1997, the rule is applicable because the units served a generator in 1995 or 1996 with a capacity greater than 25Mwe, and produced electricity for sale.

The Standards of Performance (NSPS) for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60 Subpart Db are applicable to each steam generating unit that commences construction, modification or reconstruction after June 19, 1984 and that has a heat input capacity from fuels combusted in the steam generating unit greater than 29 MW (100 million-BTU per hour). The two auxiliary Babcock and Wilcox boilers, each rated at 229.0-million BTU per hour, were constructed on August of 1988 and are subject to 40 CFR 60 Subpart Db.

The Standards of Performance (NSPS) for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction. Reconstruction, or Modification Commenced After July 23, 1984, Subpart Kb are applicable to each storage vessel with a capacity greater than or equal to 40 cubic meters (10,568 gallons) that is used to store volatile organic liquids for which construction, reconstruction or modification commenced after July 23, 1984. Two 1.250 million gallon number were constructed in August of 1988 and the third 1.250 million gallon number 2 fuel oil storage vessel was constructed in July of 1990 and all three vessels are subject to 40 CFR 60 Subpart Kb.

COMPLIANCE STATUS

The facility is inspected on an annual basis and has been in compliance. The last compliance site visit was conducted on April 11, 2003.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following :

Emission Unit No.	Stack No.	Emission Unit Description	Manufacturer and Date of Construction	Size/Rated Capacity
CT1	CT1-001	Combustion Turbine Type 11 N ABBHM300555	ABB (07-88)	1143.6 MBTU/hr. – input,natural gas 1091.1 MBTU/hr – input, # 2 fuel oil
CT2	CT2-002	Combustion Turbine Type 11 N ABBHM300556	ABB (07-88)	1143.6 MBTU/hr. – input,natural gas 1091.1 MBTU/hr – input, # 2 fuel oil
CT3	CT3-003	Combustion Turbine Type 11 N ABBHM300564	ABB (07-88)	1143.6 MBTU/hr. – input,natural gas 1091.1 MBTU/hr – input, # 2 fuel oil
AB1	AB1-004	Auxiliary Boiler	Babcock and Wilcox (07-88)	229.0 MBTU/hr. – input, natural gas 220.0 MBTU/hr. – input, # 2 fuel oil
AB2	AB2-005	Auxiliary Boiler	Babcock and Wilcox (07-88)	229.0 MBTU/hr. – input, natural gas 220.0 MBTU/hr. – input, # 2 fuel oil
G1	G1-006	Emergency Generator	Caterpillar (07-88)	5.1 MBTU/hr. – input (1,500 KW)
G2	G1-007	Emergency Generator	Caterpillar (07-88)	5.1 MBTU/hr. – input (1,500 KW)
NA	NA	Fuel Storage Tank	Vertical fixed roof (07-88)	1,250,000 gallons
NA	NA	Fuel Storage Tank	Vertical fixed roof (07-88)	1,250,000 gallons
NA	NA	Fuel Storage Tank	Vertical fixed roof (07-88)	1,250,000 gallons

The control equipment at this facility consist of the following :

Stack/Emission Unit No.	Control Equipment Description	Manufacturer and Date of Construction	Size/Rated Capacity	Pollutant
CT1	I-99 Steam Injection	ABB –Type 11N Combustion Turbine (07-88)	65% design	NOx
CT2	I-99 Steam Injection	ABB –Type 11N Combustion Turbine (07-88)	65% design	NOx
CT3	I-99 Steam Injection	ABB –Type 11N Combustion Turbine (07-88)	65% design	NOx
AB1	I-99 Low Nox burner and I-99 Flue Gas Recirculation	Babcock and Wilcox (07-88)	85% design	NOx
AB2	I-99 Low Nox burner and I-99 Flue Gas Recirculation	Babcock and Wilcox (07-88)	85% design	NOx

EMISSIONS INVENTORY

A copy of the 1998 annual emission update is available. Emissions are summarized in the following tables.

1998 Actual Emissions

	1998 Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO_2	PM_{10}	NO_x
CT1*	2.62	30.98	13.68	10.81	46.38
CT2*	2.70	31.01	16.38	11.45	51.79
CT3*	2.34	26.62	15.48	10.03	46.21
AB1*	0.62	17.54	2.17	2.31	35.49
AB2*	0.30	8.57	1.54	1.16	17.56
Emission	VOC	CO	SO_2	PM_{10}	NO_x

Unit					
G1*	0.14	0.31	0.09	0.10	1.42
G2	0.14	0.31	0.09	0.10	1.42
Total	8.86	115.34	49.43	35.96	200.27

- Estimated Allocation.

1998 Facility Hazardous Air Pollutant Emissions

Emission Unit	Lead
CT1	4.87E-03
CT2	6.00E-03
CT3	5.52E-03
AB1	1.04E-04
AB2	7.73E-05
Total	6.57E-03

EMISSION UNIT APPLICABLE REQUIREMENTS -

Combustion Turbines, Auxiliary Boilers, Emergency Generators

Limitations

Facility Limitations Requirements from the PSD permit issued on July 1, 1988 and amended on March 31, 1989 and October 31, 2000.

Part 1 of the PSD Permit

4. Each combustion turbine shall not consume more than 61.19 x 10^6 gallons No. 2 fuel or 8.99 x 10^9 $feet^3$ of natural gas annually. (9 VAC 5-170-160 of State Regulations)

5. Each auxiliary boiler shall consume no more than 13.77 x 10^6 gallons No. 2 fuel or 2.01 x 10^9 $feet^3$ of natural gas per year. (9 VAC 5-170-160 of State Regulations)

6. Emissions from the operation of each combustion turbine shall not exceed the limitations specified below:

For Natural Gas Firing

Particulates	4.0 x 10^{-3} lbs/10^6 Btu	4.57 lbs/hr	18.0 tons/yr
S02	5.4 x 10^{-4} lbs/10^6 Btu	0.62 lbs/hr	2.4 tons/yr
VOC		0.72 lbs/hr	3.1 tons/yr
CO		25.8 lbs/hr	110.4 tons/yr
N02*	42 ppmv dry at 15% 02	179.6 lbs/hr	675.6 tons/yr

For No. 2 Oil Firing

Particulates	0.039 lbs/10^6 Btu	28.0 lbs/hr	122.6 tons/yr
S02	0.21 lbs/10^6 Btu	225.0 lbs/hr	896.8 tons/yr
VOC		7.0 lbs/hr	29.1 tons/yr
CO		26.0 lbs/hr	112.0 tons/yr
N02*	65 ppmv dry at 15% 02	275.7 lbs/hr	1036.9 tons/yr
Lead	5.7 x 10^{-3} lbs/hr		2.35 x 10^{-2} tons/yr

*Nitrogen oxide emission level measured by Reference Method 20 shall be adjusted to ISO

standard dry condition by the following ambient condition correction factor:

$NOx = (NOx_{obs})\ (Pref/Pobs)^{0.5}(288^{O}K/Tamb)^{1.53}(e^{19}(Hobs - 0.00633)$

Where NOx = emissions of NOx at 15 percent 0_2 and ISO standard ambient condition =42 ppm for natural gas 65 ppm for No. 2 fuel

NOxobs = Measured NOx emissions at 15 percent oxygen ppmv

Pref = Reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure at test ambient temperature

Pobs = Measured combustor inlet absolute pressure at test ambient pressure

Hobs = Specific humidity of ambient air at test

e = Transcendental constant (2.718)

Tamb = Temperature of ambient air at test, ^{O}K

(9 VAC 5-50-410 and 5-50-280, and 5-80-11 of State Regulations, Subpart GG of State Regulations)

7. The diesel generators shall not be operated when any of the three gas turbines are on line. The generators shall be used only to start-up one single turbine after which the generators shall be taken off-line. The combined maximum number 2 fuel oil burned in the diesel generators shall not exceed 55,800 gallons per year rolling average to ensure that the annual emissions do not exceed the exemptions levels in 9 VAC 5-80-11 of the regulations
(9 VAC 5-170-160 of Regulations)

8. Emissions from the operation of each auxiliary boiler shall not exceed the limitations specified below:

<u>For Natural Gas Firing</u>

Particulates	0.1 lbs/10^6 Btu	22.9 lbs/hr	100.3 tons/yr
S02	6.0 x 10^{-4} lbs/10^6 Btu	0.14 lbs/hr	0.6 tons/yr
NOx as N02	0.1 lbs/10^6 Btu	22.9 lbs/hr	100.3 tons/yr
CO		19.92 lbs/hr	87.3 tons/yr
VOC		1.15 lbs/hr	5.0 tons/yr

<u>For No. 2 Oil Firing</u>

Particulates	.10 lbs/10^6 Btu	22.0 lbs/hr	96.4 tons/yr/unit
S02	0.20 lbs/10^6 Btu	44.0 lbs/hr	192.7 tons/yr/unit
NOx as N02	0.10 lbs/10^6 Btu	22.0 lbs/hr	96.4 tons/yr/unit
CO		19.1 lbs/hr	83.8 tons/yr/unit
VOC		1.1 lbs/hr	4.8 tons/yr/unit
Lead	1.20 x 10^{-3} lbs/hr		5.3 x 10^{-3} tons/yr/unit

(9 VAC 5-50-410 and 5-50-260, Subpart Db of State Regulations)

9. Emissions from the operation of both diesel generators #1 and#2 shall not exceed the limitations specified below:

	For No.2 Oil Firing	
SO2	2.8 lb/hr	0.8 tons/yr
NO_x as NO_2	45.1 lbs/hr	12.5 tons/yr
CO	12.0 lbs/hr	3.3 tons/yr

(9 VAC 5-50-260 of State Regulations)

10. Toxic pollutant emissions from the operation of the combustion turbines and steam generators shall be limited by not exceeding the fuel usages under Part I Specific Conditions 4 and 5 of the 10/31/00 PSD Permit.
(9 VAC 5-50-190 of State Regulations)

11. Nitrogen oxide emissions from the combustion turbines will be controlled by steam injection. The steam injection system shall be provided with adequate access for inspection.
(9 VAC 5-80-11 of State Regulations)

12. Sulfur dioxide emissions from the combustion turbines and auxiliary boilers shall be controlled by limiting the sulfur content of the No. 2 fuel oil to 0.2 percent by weight.
(9 VAC 5-80-11 of State Regulations)

13. Nitrogen oxide emissions from the auxiliary boilers shall be controlled through boiler design employing multistage low NOx burners.
(9 VAC 5-80-40 of State Regulations)

14. The approved fuels for the combustion turbines and auxiliary boilers are No. 2 fuel oil and natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-11 of State Regulations)

15. The average sulfur content of the No. 2 oil to be burned in the combustion turbines and auxiliary boilers shall not exceed 0.2 percent by weight, per shipment. Hopewell Cogeneration Limited Partnership shall maintain records of all oil shipments purchased, indicating sulfur content per shipment. These records will be available for inspection by the Board. They will be kept on file for a period of at least two (2) years.
(9 VAC 5-170-160 of State Regulations)

16. In order to facilitate continuing compliance measurements, test ports will be provided at appropriate duct(s) or stack(s) of the combustion turbines and auxiliary boilers.
(9 VAC 5-50-30 of State Regulations)

21. Hopewell Cogeneration Limited Partnership shall meet all applicable requirements of 40 CFR Part 60 Subpart GG - Standards of Performance for Stationary Gas Turbines and 40 CFR Part 60 Subparts Db – Standards of Performance for Industrial - Commercial - Institutional Steam Generating Units.
(9 VAC 5-50-410 of State Regulations)

Part 2 of the PSD Permit

8. All air pollution control equipment operators shall be trained and certified in the proper operation of all such equipment. Hopewell Cogeneration Limited Partnership shall maintain records of the required training and certification. Certification of training shall consist of a statement of time, place and nature of training provided.
(9 VAC 5-170-160 of State Regulations)

9. The Company shall develop, maintain, and have available to all operators good written operating procedures for all air pollution control equipment. A maintenance schedule for all such equipment shall be established and made available to the State Air Pollution Control Board for review. Records of service and maintenance shall be maintained on file by the source for a period of two (2) years.
(9 VAC 5-170-160 of State Regulations)

10. The Board reserves the right to modify and, if appropriate, to reissue or to rescind this permit if prior to operation there is a substantive change to the design capacity or the fundamental nature of the process or control equipment such that the potential to emit of any facility is increased.
(9 VAC 5-170-160 of State Regulations)

11. The Board reserves the right to modify and, if appropriate, to reissue or to rescind this permit if prior to operation there is a substantive' change in any of the data upon which the decision to approve this permit was based.
(9 VAC 5-170-160 of State Regulations)

14. The permitted facility is to be constructed and operated as represented in the permit application referenced in Condition 2 of Part I of the 10/31/00 PSD permit. No changes in the permit application specifications or any existing facilities shall be made which alter the emissions into the ambient air or alter the impact of the facility on air quality without the prior written approval of the Board.
(9 VAC 5-70-160 of State Regulations)

15. The facility shall operate in compliance with Rules 4-3 and 5-3, Toxic Pollutants. No changes in the facility that alter emissions of any non-criteria pollutant or cause the emission of additional toxic pollutants shall be made without the prior written approval of the Board.
(9 VAC 5-40-200 and 5-50-200 of State Regulations)

17. In the event of any change in control of ownership of the permitted source, the permittee shall notify the succeeding owner of the existence of this permit by letter and send a copy of that letter to Director, Region V.
(9 VAC 5-170-160 of State Regulations)

18. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of that provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
(9 VAC 5-170-160 of State Regulations)

19. This permit approval is only applicable to the permit requirements of the State Air Pollution Control Board and does not alter permit requirements by any other local, state, or federal government agency. Hopewell Cogeneration, Limited Partnership is cautioned that approval of this permit should not be construed to mean its operation is automatically in compliance with all aspects of the Regulations for the Control and Abatement of Air Pollution. State Air Board personnel will be constantly evaluating all sources for compliance with Part V,Section 120-05-0103 - Standard for Visible Emissions, Section 120-05-0104 - Standard for Fugitive Dust/Emissions, and Section 120-05-0203 - Standard for Odorous Emissions. Compliance with all air pollution regulations must be a continuing, full time effort.
(9 VAC 5-170-160 of State Regulations)

20. Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate your response to requests for information to include, as appropriate: fuel consumption by type, heat value and sulfur; process and production data; refuse disposal by incineration including auxiliary fuels burned; storage, handling and use of liquid organic compounds; and, changes in stack data, control equipment, and operating schedules. Such requests for information from the Regional Office will either be in writing or by personal contact of field enforcement personnel. Emissions data provided to the Board by a source must be made available to the public upon request; process data for individual facilities and plants will be made available to the public upon request unless the source claims, in writing, the information is proprietary and that it should be held as confidential.
(9 VAC 5-20-160 of State Regulations)

Facility Limitation requirements from 40 CFR 60 Subpart A

40 CFR 60.11(a)
(a) Compliance with standards in this part, other than opacity standards, shall be determined in accordance with performance tests established by §60.8, unless otherwise specified in the applicable standard.

40 CFR 60.11(b)
(b) Compliance with opacity standards in this part shall be determined by conducting observations in accordance with Reference Method 9 in appendix A of this part, any alternative method that is approved by the Administrator, or as provided in paragraph (e)(5) of this section. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).

40 CFR 60.11(c)
(c) The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

40 CFR 60.11(d)
(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator who may include, but is not limited to, monitoring results, and opacity observations, review of operating and maintenance procedures, and inspection of the source.

40 CFR 60.12 Circumvention.

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission, which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

40 CFR 60.13 Monitoring requirements.

40 CFR 60.13(a)
(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B to this part and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to this part, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

40 CFR 60.14(a)
(a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.

Facility Limitation requirements from 40 CFR 60 Subpart Subpart Db

40 CFR 60.42b(j)
(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in §60.45b(c) or §60.45b(d), and following the monitoring procedures as described in §60.47b(a) or §60.47b(b) to determine sulfur dioxide emission rate or fuel oil sulfur content; or (2) maintaining fuel receipts as described in §60.49b(r).

40 CFR 60.43b(f)
(f) On and after the date on which the initial performance test is completed or is required to be completed under 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, wood, or mixtures of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

40 CFR 60.44b(a)
(a) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8 of this part, whichever date comes first, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain nitrogen oxides (expressed as NO2) in excess of the following emission limits: 0.20 lbs/million BTU (high heat)heat input.

40 CFR 60.44b(h)
(h) For purposes of paragraph (i) of this section, the nitrogen oxide standards under this section apply at all times including periods of startup, shutdown, or malfunction.

40 CFR 60.44b(i)
(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

Facility Limitation requirements from 40 CFR 60 Subpart Subpart GG

40 CFR 60.332(a)(1)
(1) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine, any gases which contain

nitrogen oxides in excess of:

$$STD = 0.0075 (14.4) / Y + F$$

where:

STD=allowable NOx emissions (percent by volume at 15 percent oxygen and on a dry basis).
Y=manufacturer's rated heat rate at manufacturer's rated load (kilojoules per watt hour) or, actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.

F=NOx emission allowance for fuel-bound nitrogen as defined in paragraph (a)(3) of this section.

40 CFR 60.332(b)
(b) Electric utility stationary gas turbines with a heat input at peak load greater than 107.2 gigajoules per hour (100 million Btu/hour) based on the lower heating value of the fuel fired shall comply with the provisions of paragraph (a)(1) of this section.

40 CFR 60.333(a)
(a) No owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any stationary gas turbine any gases which contain sulfur dioxide in excess of 0.015 percent by volume at 15 percent oxygen and on a dry basis.

40 CFR 60.333(b)
(b) No owner or operator subject to the provisions of this subpart shall burn in any stationary gas turbine any fuel which contains sulfur in excess of 0.8 percent by weight.

40 CFR 60.334(a)
(a) The owner or operator of any stationary gas turbine subject to the provisions of this subpart and using water injection to control NOx emissions shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within 5.0 percent and shall be approved by the Administrator.

40 CFR 60.334(b)(1); also PSD Permit Part 1, Number 20
(1) If the turbine is supplied its fuel from a bulk storage tank, the values shall be determined on each occasion that fuel is transferred to the storage tank from any other source.

40 CFR 60.335(c)
(c) The owner or operator shall determine compliance with the nitrogen oxides and sulfur dioxide standards in 1160.332 and 60.333(a) as follows:

40 CFR 60.335(c)(1)
(1) The nitrogen oxides emission rate (NOx) shall be computed for each run using the following equation:

NOx=(NOxo) (Pr/Po)0.5e19(Ho-0.00633) (288 K/Ta)1.53

where:

NOx=emission rate of NOx at 15 percent O2 and ISO standard ambient conditions, volume percent.

NOxo=observed NOx concentration, ppm by volume.

Pr=reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.

Po=observed combustor inlet absolute pressure at test, mm Hg.

Ho=observed humidity of ambient air, g H2O/g air.

e=transcendental constant, 2.718.

Ta=ambient temperature, ¦ K.

40 CFR 60.335(c)(2)

(2) The monitoring device of §60.334(a) shall be used to determine the fuel consumption and the water-to-fuel ratio necessary to comply with §60.332 at 30, 50, 75, and 100 percent of peak load or at four points in the normal operating range of the gas turbine, including the minimum point in the range and peak load. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.

40 CFR 60.335(d)

(d) The owner or operator shall determine compliance with the sulfur content standard in 160.333(b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, or D 3246-81 shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 160.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.

40 CFR 60.335(e)

(e) To meet the requirements of 160.334(b), the owner or operator shall use the methods specified in paragraphs (a) and (d) of this section to determine the nitrogen and sulfur contents of the fuel being burned. The analysis may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

Facility Limitation Requirements from SAPCB regulations

9 VAC 5-20-180 (B)

In case of shutdown or bypassing, or both of air pollution control equipment for necessary scheduled maintenance for more than one hour the intent to shutdown the equipment shall be reported to the board.

Monitoring

Facility Monitoring Requirements from the PSD permit issued on July 1, 1988 and amended on March 31, 1989 and October 31, 2000

Part 1 of the PSD permit

18. A continuous emission monitor shall be installed to measure and record the concentration of nitrogen oxide and opacity of smoke emitted from the auxiliary boilers. It shall be maintained and calibrated in accordance with manufacturer's specifications.
(9 VAC 5-80-40 of State Regulations)

19. A continuous monitoring system shall be installed to monitor and record the fuel consumption and the ratio of steam to fuel being fired in the turbines. It shall be maintained and calibrated in accordance with the manufacturer's specifications.
(9 VAC 5-80-40 of State Regulations and Subpart GG - NSPS Gas Turbines)

20. Hopewell Cogeneration Limited Partnership shall monitor the sulfur and nitrogen content of the No. 2 fuel being fired in the turbines in accordance with 40 CFR Section 60.334(b).
(9 VAC 5-50-410 Subpart GG of State Regulations - NSPS Gas Turbines)

Part 2 of the PSD permit

6. All continuous monitoring systems and monitoring devices, as may be applicable for your source types, shall be installed and operational prior to conducting performance tests under Sections 5-50-30 and 5-60-30 . Performance evaluations of the continuous monitoring system must take place during the performance tests under Sections 5-50-30 and 5-60-30 or within 30 days thereafter. The Board must be furnished with two copies of the report of the performance evaluations within 60 days of said evaluation.
(9 VAC 5-50-40 and 5060-40 of State Regulations)

Facility Monitoring requirements from 40 CFR 60 Subpart Db

CFR 60.48b(b)(1)
(1) Install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring nitrogen oxides emissions discharged to the atmosphere; or

40 CFR 60.48b(c)
(c) The continuous monitoring systems required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

40 CFR 60.48b(d)
(d) The 1-hour average nitrogen oxides emission rates measured by the continuous nitrogen oxides monitor required by paragraph (b) of this section and required under §60.13(h) shall be expressed in ng/J or lb/million Btu heat input and shall be used to

calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(b). At least 2 data points must be used to calculate each 1-hour average.

40 CFR 60.48b(f)
(f) When nitrogen oxides emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7, Method 7a, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

Facility Monitoring requirements from 40 CFR 60 Subpart Subpart GG

CFR 60.335 (a)
(a) To compute the nitrogen oxides emissions the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired.

CFR 60.335 (d)
(a) The owner or operator shall determine compliance with the sulfur content standard in 60.333 (b) as follows: ASTM D 2880-71 shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82 or D 3246-81 shall be used for the sulfur content of gaseous fuels

Facility Monitoring requirements from SAPCB Regulations

9 VAC 5-50-50 D
Any owner of a new or modified source subject to the provisions of this chapter shall maintain a file of all measurements, including continuous monitoring testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this chapter recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports and records.

9 VAC 5-50-100
Unless otherwise approved by the Board, all continuous monitoring systems required by this rule shall be installed, calibrated, maintained and operated in accordance with applicable requirements in 9 VAC 5-50-40 and 9 VAC 5-10-20, Appendix J.

Record Keeping

Facility Record Keeping Requirements from the PSD permit issued on July 1, 1988 and amended on March 31, 1989 and October 31, 2000

Part 1 of the PSD permit

23. Hopewell Cogeneration Limited Partnership shall keep records of the operating status of the combustion turbines and auxiliary boilers at the beginning and ending of each

period the diesel generator is used. The amount of number 2 oil used by the diesel engine during the event shall be included in the record. The record shall be kept on file for a period of two years.
(9 VAC 5-170-160 of State Regulations)

Part 2 of the PSD permit

1. Within 10 days after receiving this permit Hopewell Cogeneration Limited Partnership (the permittee) shall notify the Board (Director, Region V) in writing of the estimated start-up date of the permitted facility. This notification is for administrative purposes only and need not be a firm date.
(9 VAC 5-170-160 of State Regulations)

2. Quarterly reports on the progress of construction shall be submitted to the Director, Region V, beginning the third month after start of construction.
(9 VAC 5-170-160 of State Regulations)

3. The permittee shall furnish written notification to the Board (Director, Region V) of:

a. The actual date on which construction commenced within 30 days after such date.

b. The anticipated start-up date postmarked not more than 60 days nor less than 30 days prior to such date.

c. The actual start-up date within 15 days after such date.

d. The anticipated date of performance tests of the combustion turbines and steam generators postmarked at least 30 days prior to such date.
(9 VAC 120-05-05 of State Regulations)

4. Each emission point for which a stack test requirement is established in Part I of this permit shall be tested to determine compliance with the emission limits contained herein within 60 days after achieving the maximum production rate but in no event later than 180 days after start-up of the permitted facility. Compliance test results shall be reported to the Board (Director, Region V) in writing within 45 days after test completion and shall conform to the test report format enclosed with this permit.
(9 VAC 120-05-03 and 120-06-03 of State Regulations)

7. The permittee shall retain records of all emission data and operating parameters required to be monitored by the terms of this permit. These records shall be maintained by the source for a period of at least two (2) years.
(9 VAC 120-05-05 and 120-06-05 of State Regulations)

13. If, for any reason, the permittee does not comply or will not be able to comply with the emission limitations or other conditions specified

in this permit, the permittee shall provide in writing to the Board (Director, Region V) the following information as soon as possible but no later than five (5) days after such conditions become known to the permittee:

Record Keeping Requirement from 40 CFR 60 Subpart A

40 CFR 60.7(a)
(a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

40 CFR 60.8(a)
(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s)and furnish the Administrator a written report of the results of such performance test.

Record Keeping Requirement from 40 CFR 60 Subpart Db

40 CFR 60.49b(d)
(d) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

40 CFR 60.49b(f)
(f) For facilities subject to the opacity standard under §60.43b, the owner or operator shall maintain records of opacity.

40 CFR 60.49b(g)
(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the nitrogen oxides standards under §60.44b shall maintain records of the following information for each steam generating unit operating day:

40 CFR 60.49b(g)(1)
(1) Calendar date.

40 CFR 60.49b(g)(2)
(2) The average hourly nitrogen oxides emission rates (expressed as NO2) (ng/J or lb/million Btu heat input) measured or predicted.

40 CFR 60.49b(g)(3)
(3) The 30-day average nitrogen oxides emission rates (ng/J or lb/million Btu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days.

40 CFR 60.49b(g)(4)
(4) Identification of the steam generating unit operating days when the calculated 30-day average nitrogen oxides emission rates are in excess of the nitrogen oxides emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken.

40 CFR 60.49b(g)(5)
(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

40 CFR 60.49b(g)(6)
(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data.

40 CFR 60.49b(g)(7)
(7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted.

40 CFR 60.49b(g)(8)
(8) Identification of the times when the pollutant concentration exceeded full span of the continuous monitoring system.

40 CFR 60.49b(g)(9)
(9) Description of any modifications to the continuous monitoring system that could affect the ability of the continuous monitoring system to comply with Performance Specification 2 or 3.

40 CFR 60.49b(g)(10)
(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix f, Procedure 1.

40 CFR 60.49b(o)
(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

Record Keeping Requirement from SAPCB Regulations

9 VAC 5-20-180 (J)
Any owner of an affected facility subject to the provision of this section shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emission for more than one hour. The records shall be maintained in a form suitable for inspection and maintained for at lease two years following the date of the occurrence.

9 VAC 5-50-50 B
Any owner of a new or modified source subject to the provision of 9 VAC 5-50-40 A shall maintain records of the occurrence and duration of any startup, shutdown or malfunction in the operation of such source ; any malfunction of the air pollution control equipment; or any period during which a continuous monitoring system or monitoring device is inoperative.

Testing

Facility Testing Requirements from the PSD permit issued on July 1, 1988 and amended on March 31, 1989 and October 31, 2000.

Part 1 of the PSD Permit

16. Within the time limits specified in General Condition No. 4 of this permit, stack emission tests shall be conducted for nitrogen oxides and carbon monoxide from the combustion turbines. Method 20 shall be used for the combustion turbines. Stack tests for new or modified sources shall be conducted and reported and data reduced as set forth in Sections 20-05-03 and 120-06-03 of State Regulations and the test methods and procedures contained in each applicable section or subpart listed in Sections 120-05-0502 and 120-06-0102. At the same time, opacity tests, in accordance with 40 CFR, Part 60, Appendix A, Method 9, shall also be conducted on the combustion turbine stack. The details of the emission tests are to be arranged with the Director, Region V.
(9 VAC 120-08-01 H of State Regulations)

17. Within the time limits specified in General Condition No. 4 of this permit, stack emission tests for particulates and nitrogen oxides from the auxiliary boilers stacks shall be conducted by methods specified under Subpart Db, Section 60.466. Stack tests for new or modified sources shall be conducted and reported and data reduced as set forth in Sections 120-05-03 and 120-06-03 of State Regulations and the test methods and procedures contained in each applicable section or subpart listed in Sections 120-05-0502 and 120-06-0102. At the same time, opacity tests, in accordance with 40 CFR, Part 60, Appendix A, Method 9, shall also be conducted on the auxiliary boiler stack. The details of the emission tests are to be arranged with the Director, Region V.
(Section 120-08-01 H of State Regulations)

Part 2 of the PSD Permit

5. The permitted facility shall be designed and constructed so as to allow emissions testing using the methods prescribed upon reasonable notice at any time.
(9 VAC 5-50-30 and 5-60-30 of State Regulations)

Reporting

Facility Reporting Requirements from the PSD permit issued on July 1, 1988 and amended on March 31, 1989 and October 31, 2000.

Part 2 of the PSD Permit

6. All continuous monitoring systems and monitoring devices, as may be applicable for your source type, shall be installed and operational prior to conducting performance tests under Sections 120-05-03 and 120-06-03. Performance evaluations of the continuous monitoring system must take place during the performance tests under Sections 120-05-03 and 120-06-03 or within 30 days thereafter. The Board must be furnished with two copies of the report of the performance evaluations within 60 days of said evaluation.

Facility Reporting Requirements from 40 CFR 60 Subpart A

40 CFR 60.11(e)

(e) (1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in §60.8 unless one of the following conditions apply. If no performance test under §60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under §60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in §60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under §60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Reference Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in paragraph (e)(5) of this section, the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of this part, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

40 CFR 60.11(e)(2)

(2) Except as provided in paragraph (e)(3) of this section, the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with paragraph (b) of this section, shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under §60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

Facility Reporting Requirements from 40 CFR 60 Subpart Db

40 CFR 60.49b(i)

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for nitrogen oxides under §60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

40 CFR 60.49b(j)
(j) The owner or operator of any affected facility subject to the sulfur dioxide standards under §60.42b shall submit reports.

40 CFR 60.49b(k)
(k) For each affected facility subject to the compliance and performance testing requirements of §60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

40 CFR 60.49b(r)
(r) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil under §60.42b(j)(2) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier which certify that the oil meets the definition of distillate oil as defined in §60.41b. For the purposes of this section, the oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition was combusted in the affected facility during the reporting period.

Facility Reporting Requirements from 40 CFR 60 Subpart GG

40 CFR 60.334(c)
(c) For the purpose of reports required under 160.7(c), periods of excess emissions that shall be reported are defined as follows:

40 CFR 60.334(c)(1)
(1) Nitrogen oxides. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with 160.332 by the performance test required in 160.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowed by the fuel-bound nitrogen allowance used during the performance test required in 160.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under 160.335(a).

40 CFR 60.334(c)(2)
(2) Sulfur dioxide. Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.

40 CFR 60.334(c)(3)
(3) Ice fog. Each period during which an exemption provided in 160.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.

40 CFR 60.334(c)(4)
(4) Emergency fuel. Each period during which an exemption provided in 160.332(k) is in effect shall be included in the report required in 160.7(c). For each period, the type, reasons,

and duration of the firing of the emergency fuel shall be reported.

6. Volatile organic compound emissions from the No. 2 fuel oil storage tanks shall be controlled by a fixed roof design with pressure vacuum valve.
(9 VAC 5-80-10 F of State Regulations)

Fuel Oil Storage Tanks

Limitations

Facility Limitations Requirements from the PSD permit issued on July 1, 1988 and amended on March 31, 1989 and October 31, 2000

3. The equipment to be installed consists of :
- two (2) 1.25 x 10^6 gallon capacity No. 2 oil storage tanks

Facility Limitations Requirements from the NSR permit issued on June 6, 1990

2. Equipment to be installed consists of:
- 1.25 million gallon No. 2 Fuel Oil Storage Tank

3. Emissions from the operation of the 1.25 million gallon No. 2 Fuel Oil Storage Tank shall not exceed the limitations specified below:

Volatile Organic Compounds	0.2 lbs/hr	1.0 tons/yr

(9 VAC 5-80-4003 of State Regulations)
These numerical limits are derived from the estimated overall emissions and are not intended to be utilized to determine compliance. Compliance shall be determined as stated in condition4.

4. The yearly throughput of No. 2 Fuel Oil shall not exceed 84xlO^6 gallons.
(9 VAC 5-170-160 of State Regulations)

5. The facility shall operate in compliance with (Rules 4-3 and 5-3 or Rule 5-3) Non-Criteria Pollutants. No changes in the facility that increase emission of any non-criteria pollutant or cause the emission of additional non-criteria pollutants shall be made without the prior written approval of the Board.
(9 VAC(s) 120-04-0305 and 120-05-0305 or 120-05-0305 of State Regulations)

6. The approved fuel for storage is No. 2 Fuel Oil. A change in the fuel stored may require a permit to modify and operate.
(9 VAC 120-08-01 of State Regulations)

7. The permittee shall furnish written notification to the Board, (Director, Region 5) of the actual start-up date within 10 days after such date.
(9 VAC 5-170-160 of State Regulations)

9. This approval shall become invalid if construction of the proposed 1.25 million gallon No.

2 Fuel Oil storage tank is not commenced within eighteen months of the date of this permit or if it is discontinued for a period of 18 months.
(9 VAC 120-08-01 1 of State Regulations)

11. In the event of any change in control of ownership of the permitted source, the permittee shall notify the succeeding owner of the existence of this permit by letter and send a copy of that letter to the Director, Region 5.
(9 VAC 5-170-160 of State Regulations)

Monitoring

None

Record Keeping

Facility Limitations Requirements from the NSR permit issued on June 6, 1990

8. The permittee shall retain records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Such records shall be readily accessible.
(9 VAC 120-05-05 of State Regulations)

10. A copy of this permit shall be maintained on the premises of the facility to which it applies.
(9 VAC 5-170-160 of State Regulations)

Facility Limitation requirements from 40 CFR 60 Subpart Kb

40 CFR 60.116 (b)
(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of the section, for at least two years. The record required by paragraph (b) of this section will be kept for the life of the source.
(b) The owner or operator of each storage vessel as specified in section 60.110 (a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Each storage vessel with a design capacity less than 75 m^3 is subject to no provision of this subpart other than those required by this paragraph.

Testing

None

Reporting

None

FACILITY WIDE GENERAL CONDITIONS

1. The owner of any stationary source emitting 25 tons per year or more of volatile organic compounds or nitrogen oxides and located in any emissions control area designated in Appendix P of 9 VAC 5-10 shall submit an emissions statement to the board by April 15 of each year, beginning in 1993, for the emissions discharged during the previous calendar

year. Emissions statements shall be prepared and submitted in accordance with the applicable procedure in Appendix S of 9 VAC 5-10. (9 VAC 5-20-160 B)

2. Regardless of any other provision of this section, any facility which is subject to the provisions of 9 VAC 5-50-170 through 9 VAC 50-230 shall shut down immediately upon request of the board if its emissions increase in any amount because of a bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment; and such facility shall not return to operation until it and the associated air pollution control equipment are able to operate in a proper manner. (9 VAC 5-20-180 F 3)

3. An owner of an affected facility subject to the provisions of this section shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. The records shall be maintained in a form suitable for inspection and maintained for at least two years following the date of the occurrence (9 VAC 5-20-180 J)

4. At all times the disposal of volatile organic compounds shall be accomplished by taking measures, to the extent practicable, consistent with air pollution control practices for minimizing emissions. Volatile organic compounds shall not be intentionally spilled, discarded in sewers which are not connected to a treatment plant, or stored in open containers or handled in any manner that would result in evaporation beyond that consistent with air pollution control practices for minimizing emissions. (9 VAC 5-50-20 F)

5. The owner of a stationary source shall keep records as necessary to determine its emissions. Any owner claiming that a facility is exempt from the provisions of these regulations shall keep records to demonstrate its continued exempt status. (9 VAC 5-50-50 F)

6. Upon request of the board, the owner of a new or modified source shall provide notifications and reports, maintain records or report performance test or monitoring results in a manner and form and using procedure acceptable to the board. (9 VAC 5-50-50 H)

7. During the construction, modification or operation phase of a stationary source or any other building, structure, facility or installation, no owner or other person shall cause or permit an materials or property to be handled, transported, stored, used, constructed, altered, repaired or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. (9 VAC 5-50-90 and 9 VAC 5-50-300)

8. The owner shall use the best available control technology as approved by the board for the control of odorous emissions. (9 VAC 5-50-140 A and 9 VAC 5-50-310)

9. No owner or other person shall cause or permit to be discharged into the atmosphere from any affected facility any odorous emissions in excess of that resultant from using best available control technology, as reflected in any condition that may be placed upon

the permit approval for the facility.
(9 VAC 5-50-140 B)

10. Unless specified otherwise in this part, on or after the date on which the performance test required to be conducted is completed, no owner or other person shall cause o permit to be discharge into the atmosphere from any affected facility any visible emissions which exhibit greater than 20 percent opacity, except for one six-minute period in any one hour of not more than 30 percent opacity. Failure to meet the requirements of this section because of the presence of water vapor shall not be a violation of this section.
(9 VAC 5-50-140 B and 9 VAC 5-50-290)

Periodic Monitoring

Limitation	Parameter	Monitoring	Record Keeping	Reporting
AB1 & AB2 – Sulfur content not to exceed 0.2%. Nitrogen must meet distillate oil definition in 60.41 b	Sulfur content of fuel oil	Maintain vendor receipts; each time fuel is transferred to fuel oil tank – 40 CFR 60.334 b 1	40 CFR 60.42 b (j)	Not applicable
AB1 & AB2 – NO_x emission less than 0.1 lbs/MMBtu	Nitrogen dioxide emissions	Continuous emission monitor (CEM)	40 CFR 60.48 b (c)	Not applicable
AB1 & AB2 – Calculate annual capacity factor	Amount of each fuel combusted	Meter each day	40 CFR 60.49 b (d)	Not applicable
AB1 & AB2 – NO_x emission less than 0.1 lbs/MMBtu	Nitrogen dioxide emissions	Continuous emission monitor (CEM)	40 CFR 60.48 b (c)	40 CFR 60.49 b (I) quarterly report
AB1 & AB2 – Sulfur content not to exceed 0.2%. Nitrogen must meet distillate oil definition in 60.41 b	Sulfur content of fuel oil	Maintain vendor receipts; each time fuel is transferred to fuel oil tank – 40 CFR 60.334 b 1	Not applicable	40 CFR 60.49 b (j) quarterly report
AB1 & AB2 – Sulfur content not to exceed 0.2%. Nitrogen must meet distillate oil definition in 60.41 b	Sulfur & nitrogen content	Maintain vendor receipts; each time fuel is transferred to fuel oil tank – 40 CFR 60.334 b 1	40 CFR 60.49 b (r)	40 CFR 60.49 b (r) quarterly report
CT1, CT2 & CT3 – No. 2 oil ≤ 61.19 x 10^6 gal/yr & Natural gas ≤ 8.99 x 10^9 ft^3/yr	Fuel consumption	Sum monthly totals	PSD permit Part 1, condition 4	Not applicable
AB1, & AB2 –	Fuel consumption	Sum daily totals	PSD permit Part 1,	Not applicable

Limitation	Parameter	Monitoring	Record Keeping	Reporting
No. 2 oil ≤ 13.77 x 10^6 gal/yr & Natural gas ≤ 2.01 x 109 ft^3/yr			condition 5	
CT1, CT2 & CT3 – *Natural gas firing* - PM: 4.0 x 10^{-3} lbs/MMBtu, 4.57 lbs/hr, & 18.0 tons/yr SO_2 : 5.4 x 10^{-4} lbs/MMBtu, 0.62 lbs/hr & 2.4 tons/yr VOC : 0.72 lbs/hr & 3.1 tons/yr CO : 25.8 lbs/hr & 110.4 tons/yr NO_x : 42 ppmv dry at 15% 0_2 & 675.6 tons/yr *No. 2 fuel oil firing* - PM: 0.339 lbs/MMBtu, 28.0 lbs/hr, & 122.6 tons/yr SO_2 : 0.21 ls/MMBtu, 225.0 lbs/hr & 896.8 tons/yr VOC :7.0 lbs/hr & 29.1 tons/yr CO : 26.0 lbs/hr & 112.0 tons/yr NO_x : 65 ppmv dry at 15% 0_2 & 1,036.9 tons/yr Lead : 5.7 x 10^{-3} lbs/hr & 2.35 x 10^{-2} tons/yr	Criteria pollutant emissions	AP-42 emission factors	PSD permit Part 1 condition 6	VAC 5-20-160 (B)
G1, & G 2 – No. 2 oil ≤ 46,500 gal/yr combined	Fuel consumption	Manually read tank levels	PSD permit Part 1, condition 7	Not applicable
AB1 & AB2 – *Natural gas firing* - PM: 0.1 lbs/MMBtu, 22.9 lbs/hr, &	Criteria pollutant emissions	AP-42 emission factors	PSD permit Part 1 condition 8	VAC 5-20-160 (B)

Limitation	Parameter	Monitoring	Record Keeping	Reporting
100.3 tons/yr $\underline{SO_2}$: 6.0 x 10^{-4} lbs/MMBtu, 0.14 lbs/hr & 0.6 tons/yr $\underline{VOC}$: 1.15 lbs/hr & 5.0 tons/yr $\underline{CO}$: 19.92 lbs/hr & 87.3 tons/yr $\underline{NO_x}$ as NO_2 : 0.1 lbs/MMBtu 22.9 lbs/hr 100.3 tons/yr *<u>No. 2 fuel oil firing</u>* – <u>PM</u>: 0.1 lbs/MMBtu, 22.0 lbs/hr, & 96.4 tons/yr $\underline{SO_2}$: 0.20 lbs/MMBtu, 44 lbs/hr & 192.7 tons/yr <u>VOC</u> : 1.1 lbs/hr & 4.8 tons/yr <u>CO</u> : 19.1 lbs/hr & 83.8 tons/yr $\underline{NO_x}$ as NO_2 : 0.1 lbs/MMBtu 22.0 lbs/hr 96.4 tons/yr <u>Lead</u> : 1.2 x 10^{-3} lbs/hr & 5.3 x 10^{-3} tons/yr				
CT1, CT2, CT3, AB1 & AB2 – Sulfur content average not to exceed 0.2%.	Sulfur content of fuel oil	Vendor certification; each shipment	PSD Permit Part 1, condition 14 two years of records	Not applicable
CT1, CT2, CT3 **AB1 & AB2** **G1 & G2** operating status	Operating status & amount of no. 2 fuel oil used by diesel engines	Manual – each period that diesel engines are used	PSD Permit Part 1, condition 23 two years of records	Not applicable
CT1, CT2, CT3 **AB1 & AB2** **G1 & G2** records of emission data and operating parameters	Emission data and operating parameters	AP-42 emission factors	PSD Permit Part II, condition 7 two years of records	Not applicable
CT1, CT2, CT3 **AB1 & AB2**	Opacity tests – conduct, record & report	As required by performance tests	40 CFR 60.11 (e)	40 CFR 60.11 (e)

Limitation	Parameter	Monitoring	Record Keeping	Reporting
G1 & G2 opacity tests				
Fuel Oil Storage Tank 1 VOC : 0.2 lbs/hr & 1.0 tons/yr	Criteria pollutant emissions	AP-42	NSR permit, 6/6/90, condition 3	9 VAC 5-50-260
Fuel Oil Storage Tank 1 No. 2 fuel oil ≤ 84 x 10^6 gal/yr	Fuel oil throughput	Maintain records	NSR permit 6/6/90 condition 4	9 VAC 5-170-160-
Fuel Oil Storage Tanks 1, 2, 3 Store only No. 2 fuel oil	Dimensions and analysis showing capacity of storage vessels	Maintain records	NSR permit 6/6/90 condition 8 40 CFR 60.116 b	9 VAC 5-50-50-

Virginia Administrative Code Requirements

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

None.

The following table is only required for those pollutants that have emission limits.

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
VOC	EPA Methods 24, 24a
NOx	EPA Method 7, 20
SO2	EPA Method 6, 20
CO	EPA Method 10
PM/PM10	EPA Methods 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

Streamlined Requirements

Permit Condition Number	Description	Reason
03/31/89 PSD Permit Part 1, Condition 16	Stack test for NOx performed on combustion turbines	Obsolete; stack test performed on 05/14/90
03/31/89 PSD Permit Part 1, Condition 17	Stack test for NOx performed on auxiliary boilers	Obsolete; stack test performed on 06/11/90
03/31/89 PSD Permit Part 2, Condition 1	Start-up notification	Obsolete; Board notified
03/31/89 PSD Permit Part 2, Condition 2	Construction quarterly reports	Obsolete; construction complete
03/31/89 PSD Permit Part 2, Condition 3	Dates of start-up and compliance tests	Obsolete; construction complete
03/31/89 PSD Permit Part 2, Condition 4	Stack test – performed no later than 60 days but prior to 180 days after start-up	Obsolete; stack tests performed and results reported
03/31/89 PSD Permit Part 2, Condition 5	Facility designed to allow stack testing	Obsolete; facility designed and constructed
03/31/89 PSD Permit Part 2, Condition 6	CEMs installed prior to testing	Obsolete; CEMs were installed prior to testing
03/31/89 PSD Permit Part 2, Condition 12	Meet local zoning requirements	Obsolete; zoning requirements met
03/31/89 PSD Permit Part 2, Condition 16	Invalid if construction not commenced by 01/01/90	Obsolete; construction is complete
40 CFR 60.42 b (j)	Facility combusting very low sulfur fuel (0.5 percent weigh sulfur)	03/31/89 PSD Permit, Part 1, Conditions 11 and 14 are more stringent limiting sulfur content of No. 2 oil to 0.2 percent
40 CFR 60.333 (b)	Facility shall not burn any fuel with a sulfur content greater than 0.8 percent weigh in a gas turbine	03/31/89 PSD Permit, Part 1, Conditions 11 and 14 are more stringent limiting sulfur content of No. 2 oil to 0.2 percent
40 CFR 60.335 (a), (d)	Monitoring requirements for nitrogen and sulfur in the fuel	**Vendor rather than facility will perform fuel analysis and provide information with delivery**
9 VAC 5-20-180 (J) 9 VAC 5-50-50 (B)	Record keeping for start-up, shutdown, excess emissions due to bypass or malfunction	**9 VAC 5-50-50 (B) more stringent**
9 VAC 5-20-180 (D) 9 VAC 5-50-100 (B)	CEMs – measurements, record keeping and reporting	**9 VAC 5-50-50 (D) more stringent**
06/06/90 NSR Permit Condition 7	Start-up notification	Obsolete; Board notified
06/06/90 NSR Permit Condition 9	Invalid if construction not commenced within 18 months of permit date	Obsolete; construction is complete

PART 70 GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

From the 03/31/89 PSD Permit Condition Numbers : 6 and 8

FUTURE APPLICABLE REQUIREMENTS

The facility does not have any future applicable requirements. During the next Title V Permit re-opening or five year renewal the requirement for enhanced monitoring are to be included in the permit. The present NSR permit and Draft Title V permit monitoring appears to conform to this requirement.

INAPPLICABLE REQUIREMENTS

The facility does not have any inapplicable requirements. Numerous modifications to 40 CFR 60 NSPS GG and Db and A have been approved by US EPA for this source as provided in each subpart.

COMPLIANCE PLAN

The facility has included a compliance assurance monitoring plan (CAM) for combustion turbines CT1, CT2 and CT3.

RISK MANAGEMENT PLAN

The facility Risk Management Plan was submitted on June 17, 1999.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
14	Fuel Oil Piping Fugitives	5-80-720 B 2.	VOC	NA
15	Diesel Tank for Fire Pump	5-80-720 B. 2	VOC	200 gallons
16	Propane Bottles	5-80-720 B. 2	NA	Six 100 lbs bottles
17	Natural Gas Piping	5-80-720 B 2.	VOC	NA
18	Diesel Generator Fuel Oil Tank	5-80-720 B. 2	VOC	15,000 gallons
19	Paved Roads	5-80-720 B. 1	PM	NA
110	Oil/Water Separator	5-80-720 B. 2	VOC	< 500 gallons
111	Used Oil Tank	5-80-720 C. 3	VOC	< 264 gallons

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

NOx BUDGET TRADING PERMIT REQUIREMENTS

The following units are applicable to the NOx Budget Trading -

Table X – 1 Facility NO_X Budget Units				
Facility Unit ID	NATS Account ID	Unit Name and description	Maximum Heat Capacity (MMBtu/hr)	Maximum Generation Capacity (megawatts)
CT1	010633 - 000001	ABB Type 11N Combustion Turbine and Nooter Eriksen Heat Recovery Steam Generator	1,143.6	Total Facility rated at 356.5 MW of the combined three turbine generators.
CT2	010633- 000002	ABB Type 11N Combustion Turbine and Nooter Eriksen Heat Recovery Steam Generator	1,143.6	
CT3	010633- 000002	ABB Type 11N Combustion Turbine and Nooter Eriksen Heat Recovery Steam Generator	1,143.6	

Standard Requirements

Monitoring requirements.

1. The owners and operators and, to the extent applicable, the NO_X authorized account representative of each NO_X Budget source and each NO_X Budget unit at the source shall comply with the monitoring requirements of Part I, Article 8 (9 VAC 5-140-700 et seq.).
   (9 VAC 5-140-60 B.1)

2. The emissions measurements recorded and reported in accordance with (9 VAC 5-140-700 et seq.) (Subpart H of 40 CFR Part 97) shall be used to determine compliance by the unit with the NO_X Budget emissions limitation under paragraphs B.2.a through B.2.h.
   (9 VAC 5-140-60 B.2)

Nitrogen oxides requirements.

1. The owners and operators of each NO_X Budget source and each NO_X Budget unit at the source shall hold NO_X allowances available for compliance deductions under 9 VAC 5-140-540 A, B, E, or F, as of the NO_X allowance transfer deadline, in the unit's compliance account and the source's overdraft account in an amount not less than the total NO_X emissions for the control period from the unit, as determined in accordance with Part I, Article 8 (9 VAC 5-140-700 et seq.), plus any amount necessary to account for actual utilization under 9 VAC 5-140-420 E for the control period or to account for excess emissions for a prior control period under 9 VAC 5-140-540 D or to account for withdrawal from the NO_X Budget Trading Program, or a change in regulatory status, of a NO_X Budget opt-in unit under 9 VAC 5-140-860 or 9 VAC 5-140-870.
   (9 VAC 5-140-60 C.1)
2. Each ton of nitrogen oxides emitted in excess of the NO_X Budget emissions limitation shall constitute a separate violation of 9 VAC 5 Chapter 140, Part I, the Clean Air Act, and applicable Virginia Air Pollution law.
   (9 VAC 5-140-60 C.2)

3. A NO_X Budget unit shall be subject to the requirements under 9 VAC 5-140-60 C.1 starting on the later of May 31, 2004, or the date on which the unit commences operation.
(9 VAC 5-140-60 C.3)

4. NO_X allowances shall be held in, deducted from, or transferred among NO_X Allowance Tracking System accounts in accordance with Part I, Article 5 (9 VAC 5-140-400 et seq.), Article 6 (9 VAC 5-140-500 et seq.), Article 7 (9 VAC 5-140-600 et seq.), and Article 9 (9 VAC 5-140-800 et seq.).
(9 VAC 5-140-60 C.4)

5. A NO_X allowance shall not be deducted, in order to comply with the requirements under 9 VAC 5-140-60 C.1 for a control period in a year prior to the year for which the NO_X allowance was allocated.
(9 VAC 5-140-60 C.5)

6. A NO_X allowance allocated by the permitting authority or the administrator under the NO_X Budget Trading Program is a limited authorization to emit one ton of nitrogen oxides in accordance with the NO_X Budget Trading Program. No provision of the NO_X Budget Trading Program, the NO_X Budget permit application, the NO_X Budget permit, or an exemption under 9 VAC 5-140-50 and no provision of law shall be construed to limit the authority of the United States or the State to terminate or limit such authorization.
(9 VAC 5-140-60 C.6)

7. A NO_X allowance allocated by the permitting authority or the administrator under the NO_X Budget Trading Program does not constitute a property right.
(9 VAC 5-140-60 C.7)

8. Upon recordation by the administrator under Part I, Article 6 (9 VAC 5-140-500 et seq.), Article 7 (9 VAC 5-140-600 et seq.), or Article 9 (9 VAC 5-140-800 et seq.), every allocation, transfer, or deduction of a NO_X allowance to or from a NO_X Budget unit's compliance account or the overdraft account of the source where the unit is located is deemed to amend automatically, and become a part of, any NO_X Budget permit of the NO_X Budget unit by operation of law without any further review.
(9 VAC 5-140-60 C.4)

Excess emissions requirements The owners and operators of a NO_X Budget unit that has excess emissions in any control period shall:

1. Surrender the NO_X allowances required for deduction under 9 VAC 5-140-540 D 1; and

2. Pay any fine, penalty, or assessment or comply with any other remedy imposed under 9 VAC 5-140-540 D 3.

Recordkeeping and Reporting Requirements.

1. The following requirements concerning recordkeeping and reporting shall apply:
Unless otherwise provided, the owners and operators of the NO_X Budget source and each NO_X Budget unit at the source shall keep on site at the source each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the permitting authority or the administrator.
(9 VAC 5-140-60 E.1)

2. The account certificate of representation for the NO_X authorized account representative for the source and each NO_X Budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 9 VAC 5-140-130; provided

that the certificate and documents shall be retained on site at the source beyond such five-year period until such documents are superseded because of the submission of a new account certificate of representation changing the NO_X authorized account representative.
(9 VAC 5-140-60 E.1)

3. All emissions monitoring information, in accordance with Part I, Article 8 (9 VAC 5-140-700 et seq.), provided that to the extent that Part I, Article 8 (9 VAC 5-140-700 et seq.) provides for a three-year period for recordkeeping, the three-year period shall apply.
(9 VAC 5-140-60 E.1)

4. Copies of all reports, compliance certifications, and other submissions and all records made or required under the NO_X Budget Trading Program.
(9 VAC 5-140-60 E.1)

5. Copies of all documents used to complete a NO_X Budget permit application and any other submission under the NO_X Budget Trading Program or to demonstrate compliance with the requirements of the NO_X Budget Trading Program.
(9 VAC 5-140-60 E.1)

6. The NO_X authorized account representative of a NO_X Budget source and each NO_X Budget unit at the source shall submit the reports and compliance certifications required under the NO_X Budget Trading Program, including those under Part I, Article 4 (9 VAC 5-140-300 et seq.), Article 8 (9 VAC 5-140-700 et seq.), or Article 9 (9 VAC 5-140-800 et seq.).
(9 VAC 5-140-60 E.1)

Certification

The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports will be provided at the appropriate locations.
(9 VAC 5-50-30 and 9 VAC 5-140-300)

Liability

1. Any person who knowingly violates any requirement or prohibition of the NO_X Budget Trading Program, a NO_X Budget permit, or an exemption under 9 VAC 5-140-50 shall be subject to enforcement pursuant to applicable State or Federal law.
(9 VAC 5-140-100 F.1)

2. Any person who knowingly makes a false material statement in any record, submission, or report under the NO_X Budget Trading Program shall be subject to criminal enforcement pursuant to the applicable State or Federal law.
(9 VAC 5-140-100 F.2)

3. No permit revision shall excuse any violation of the requirements of the NO_X Budget Trading Program that occurs prior to the date that the revision takes effect.
(9 VAC 5-140-100 F.3)

4. Each NO_X Budget source and each NO_X Budget unit shall meet the requirements of the NO_X Budget Trading Program.
(9 VAC 5-140-100 F.4)

5. Any provision of the NO_X Budget Trading Program that applies to a NO_X Budget source or the NO_X authorized account representative of a NO_X Budget source shall also apply to the owners and operators of such source and of the NO_X Budget units at the source.
(9 VAC 5-140-100 F.5)

6. Any provision of the NO_X Budget Trading Program that applies to a NO_X Budget unit or the NO_X authorized account representative of a NO_X budget unit shall also apply to the owners and operators of such unit. Except with regard to the requirements applicable to units with a common stack under Article 8 (9 VAC 5-140-700 et seq.), the owners and operators and the NO_X authorized account representative of one NO_X Budget unit shall not be liable for any violation by any other NO_X Budget unit of which they are not owners or operators or the NO_X authorized account representative and that is located at a source of which they are not owners or operators or the NO_X authorized account representative.
(9 VAC 5-140-100 F.6)

Effect on Other Authorities.

No provision of the NO_X Budget Trading Program, a NO_X Budget permit application, a NO_X Budget permit, or an exemption under 9 VAC 5-140-50 shall be construed as exempting or excluding the owners and operators and, to the extent applicable, the NO_X authorized account representative of a NO_X Budget source or NO_X Budget unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, the Clean Air Act.
(9 VAC 5-140-100 G)

CONFIDENTIAL INFORMATION
This facility does not have confidential information in the permit application.

PUBLIC PARTICIPATION

The original proposed permit was placed on public notice in the Richmond Times Dispatch from February 7, 2001 to March 9, 2001. The Piedmont Regional Office received comments from Hopewell Cogen on March 2, 2001 and from EPA on March 13, 2001 following a verbal response on March 9, 2001. The comments and the PRO response are included in the attached letters.

AMENDED PERMIT
The amended Title V permit to incorporate the NOx Budget requirements was submitted to EPA for review on October 17, 2003. The 45-day review period ended on November 30, 2003 and no comments were received.